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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,656	11/20/2006	Tomoyuki Shinoda	0599-0214PUS1	5671
2292 7590 01/25/2010 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
PATEL, RONAK C				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
01/25/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

### Office Action Summary

**Application No.**

10/573,656

**Applicant(s)**

SHINODA ET AL.

**Examiner**

RONAK PATEL

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-5, 7-16, 21-26 and 31 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, 7-11, 21-26 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/28/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/06)  
Paper No(s)/Mail Date See Continuation Sheet
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :20061120  
20060425 20060328 20100115.

### DETAILED ACTION

1. Applicant's election with traverse of claims 12-16 in the reply filed on 10/13/2009 is acknowledged. The traversal is on the ground(s) that all the present claims require the presence of thermosetting resin and an imidazole compound, a special technical feature, such that the search and examination of all pending claims include a significant overlap. This is not found persuasive because it is agreed that all the claims share a common technical feature such as thermosetting resin and an imidazole compound. However, if it can be established that the special technical feature is known, there is lack of unity *a posteriori*, since thermosetting resin and an imidazole compound is not a technical feature that defines a contribution over the prior art (see MPEP 1850 II). Given that all claims share a special technical feature and given that the examiner found a reference that discloses the special technical feature, the present claims do not make contribution over cited prior art and therefore, there is a lack of unity.

The requirement is deemed proper and is therefore made FINAL.

2. Claims 3-11, 21-26, 31 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected claims, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/13/2009

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 12, 13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugimori et al. (US 6670006).
5. Regarding claims 12, 13, and 16, Sugimori discloses an epoxy resin composition for FRP and a prepreg that is an intermediate material made up of an epoxy resin composition combined with reinforcing fibers (abstract). Epoxy resins after curing are excellent in mechanical, electrical and adhesive properties and widely used in the field of electronic materials, coating materials (col. 1, lines 2—24), which makes it an adhesive composition. The epoxy resin composition comprises epoxy resins and a curing agent (abstract) wherein the curing agent of the epoxy resin composition can be such as imidazole compounds etc (col. 5, lines 24-29). Sugimori discloses a subject matter prepreg comprising a sheet of reinforcing fibers impregnated with epoxy resin composition (col. 2, lines 46-50). Sugimori also discloses the reinforcing fibers is made of carbon fibers, glass fibers, aramid fibers, boron fibers, steel fibers singly or in combination wherein carbon fibers are preferred since the mechanical properties after molding are good (col. 7, lines 18-23)

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Friedrich et al. (US 5340946) in view of Sugimori et al. (US 6670006).

8. Regarding claim 12-16, Friedrich discloses an adhesive composition comprising at least one film forming polymeric resin such as epoxies and a curing agent (abstract). Friedrich discloses in example 5 in column 18, where the adhesive layer is laminated on the surface of a substrate which comprises a piece of fiberglass reinforced epoxy laminate and a piece of epoxy prepeg was placed on the fiberglass reinforced epoxy laminate and epoxy resin of the prepeg was cured. The surface of the cured prepeg was then brushed in order to roughen the surface prior to the application of the adhesive layer. However, Friedrich fails to disclose that the reinforcing fibers are impregnated with the adhesive resin composition and wherein the reinforcing fibers are carbon fibers and fails to disclose that the curing agent is an imidazole compound. However, Sugimori discloses an epoxy resin composition for FRP, a prepeg that is an intermediate material made up of an epoxy resin composition combined with reinforcing fibers (abstract). The epoxy resin composition comprises epoxy resins and a curing agent (abstract) wherein the curing agent of the epoxy resin composition can be such as imidazole compounds etc (col. 5, lines 24-29). Epoxy resins after curing are excellent in mechanical, electrical and adhesive properties and widely used in the field of electronic materials, coating materials (col. 1, lines 2—24), which makes it an adhesive composition. Sugimori discloses a subject matter prepeg comprising a sheet of reinforcing fibers impregnated with epoxy resin composition (col. 2, lines 46-50). Sugimori also discloses the

reinforcing fibers is made of carbon fibers, glass fibers, aramid fibers, singly or in combination, carbon fibers are preferred since the mechanical properties after molding are good (col. 7, lines 18-23). The motivation for impregnating reinforcing fibers with the adhesive composition and using the curing agent as imidazole compound is to form a prepreg that has suitable tack and flexibility and is good in balance between stability with time and curability and also the crushing and the flexural strength in a direction of 90 degree are improved (col. 7, lines 50-58) and the motivation for using the carbon fibers in the prepreg is to have good mechanical properties after molding (col. , lines 18-23).

9. In light of the motivation of impregnating reinforcing fibers with the adhesive composition and using the curing agent as imidazole compound and using the carbon fibers in the prepreg as taught by Sugimori as described above, it therefore would have been obvious to one of ordinary skill in the art at the time of invention to use adhesive composition with epoxy and imidazole compound wherein carbon fibers are impregnate the reinforcing fibers of Friedrich with the reinforcing carbon fibers with an imidazole with the adhesive composition as taught by Sugimori to form a prepreg that has suitable tack and flexibility and is good in balance between stability with time and curability and also the crushing and the flexural strength in a direction of 90 degree are improved to have good mechanical properties after molding (col. , lines 18-23).

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONAK PATEL whose telephone number is (571)270-

1142. The examiner can normally be reached on Monday to Thursday 8 AM EST to 6PM EST.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. P./  
Ronak Patel  
Patent Examiner, Art Unit 1794  
01/15/2010

/Callie E. Shosho/  
Supervisory Patent Examiner, Art Unit 1794